8 **The Shipping Industry of the Severn Sea** (Evan T. Jones)

We now know a fair amount about the Newport Medieval Ship. Thanks to the dendrochronological evidence, it is clear that it was built c.1449, wrecked c.1468 and was almost certainly a product of the Basque shipbuilding industry.[1] It may not, however, have remained in the Basque Country for long; ships are transportable by nature and the market for them was international. Bristol merchants, for example, sometimes bought vessels in Continental ports during the late fifteenth and sixteenth century, including ones that were commissioned directly from Basque shipyards.[2] Moreover, ships could be acquired as 'prize', after being taken at sea by force, change hands as a result of a legal dispute, or simply be sold to merchants from another port.[3] So knowing the origin of the ship does not necessarily tell you who owned and operated it.

Why the Newport Ship ended up in Wales is uncertain and, given its seventeen-year history, it might have had a number of different owners during its life. On the other hand, the very fact that it was undergoing an extensive refit in a Welsh port at the time it was wrecked, combined with the use of British oak in earlier repair-work, suggests that it was locally owned by the time it foundered and that it had sailed to Britain previously. So, while the ship began life as a Basque vessel, it almost certainly ended it as a British one.

Apart from the Newport Ship's origins and end, the archaeology has thrown some light on its employment. The Portuguese pottery fragments and lost coins found in its bilges,

which seem to represent the detritus of the ship's daily life, suggest that it was engaged in the trade to southern Iberia. Moreover, pollen analysis implies that large quantities of late summer heather had been present in its hold. [4] This was not an 'economic cargo', rather it was a plant commonly used in southern Iberia as dunnage (packing material) to help stow goods for shipment to northern Europe. Such evidence fits well with what is known about the maritime trade of the Severn Sea during this period. The most recent estimates of the Newport Ship's size suggest it was a two-decked vessel with a carrying capacity of 161 tons burden, which meant that it could stow that many tuns of wine in its hold.[5] A merchantman of that size would have been considered a great ship by contemporary standards and used almost exclusively for long-distance trade, such as the routes that linked Bristol to southwest France, Iberia and Iceland.[6]

During the 1450s and 1460s, when the Newport Ship sailed the seas, Bristol's most important trading partner was Lisbon, which replaced Bordeaux following England's loss of Gascony in 1453. The surviving sections of Bristol's 'particular' customs accounts for 1465/6 indicate that Lisbon accounted for about half of Bristol's trade that year.[7] This commerce was centred on the export of English woollen cloth to Portugal, which was exchanged for wine, olive oil and fruit, particularly during the autumn and winter months. The pollen found on the ship is thus likely to have been a by-product of this trade, used to help pack and protect wooden barrels of wine and oil during their voyage.

The purpose of this chapter is to supplement and extend the work that has been done on overseas trade, by exploring the Severn Sea's shipping market and the industry that served it. Trade and shipping are different matters, in that while merchants were concerned with the

profits that could be generated from their wares, the income of shipowners relied, for the most part, on the sale of freight space. As such, the size, nature and revenue of the shipping industry was dependent on the volume of goods that needed to be transported and the distance they had to be carried. To get a fuller understanding of the economic world in which the Newport Medieval Ship operated, it is necessary to treat shipping and trade as distinct. This indeed is still true today, as a modern example might illustrate.

The Shipping Market

In July 2014, the cost of hiring a 40-foot 'Dry Van Container' from Shanghai to Felixstowe was US$2,350. Yet the hire of the same container for the return journey was just US$550 (£320).[8] The reason for this discrepancy is that that while the United Kingdom imports large amounts of manufactured goods from China, it exports few physical wares in return. The supply of shipping containers to China thus vastly exceeds the demand for them and, when the supply of any product exceeds demand, its price can be expected to fall. Since the shipowners must send the containers and ships back to China anyway, they are forced to take whatever they can get for their hire on the return leg of the voyage, even if the charge barely covers their transaction costs. The chief consequence of this for the shipping companies is that their revenues, and still more their profits, are dependent almost entirely on the China-England leg of their voyages.

This contemporary example is relevant to the Newport Ship because, as will be shown, the medieval shipping market of the Severn Sea has some similarities with the modern one

between China and the United Kingdom. The following section will examine this market by using the customs accounts for Bristol relating to three financial years: 1465/6, 1485/6 and 1503/4.

The 'particular' customs accounts of the English medieval Exchequer are one of the best sets of commercial records that exist for the late-medieval world. Where they survive, they detail every ship, merchant and item of merchandise that entered or left an English port. They do not, it should be noted, include the Welsh ports, since Wales, along with Chester, only became subject to royal customs during the 1560s. On the other hand, that is not a serious a problem because, from what we know of late-sixteenth century trade, Bristol accounted for the great bulk of the region's foreign trade.[9] Moreover, even when the Severn Sea's other ports did engage in overseas trade in the later period, their merchants rarely went beyond Ireland, or the closer parts of the Continent, often employing the same small vessels that were used for coastal and river traffic. So, if the Newport Medieval Ship was locally owned, its prime commercial purpose, as a great ship, would have been to serve Bristol's long-distance trade. A study of Bristol's fifteenth-century shipping market is thus of direct relevance to understanding how vessels like the Newport Ship would have been employed. For this study, the Bristol 'particular' customs accounts of the later-fifteenth century are especially useful because, apart from detailing the goods carried, the owners of those goods, and the ships employed, the accounts also include information about the size of the vessels and the places they were sailing to or from.

For the historian of shipping, the chief limitation of the 'particular' customs accounts is that they do not detail the tonnage of all the cargo, or the tonnage of the ship itself.[10] They

thus fail to record explicitly the two key pieces of information needed for a detailed study of the shipping market. On the other hand, the accounts do indicate the *quantity* of all merchandise on the ship. That is helpful because, in practice, the goods that were responsible for the vast majority of Bristol's trade in this period were either recorded in tons, or were documented using units of measurement that can be translated into a 'freight ton': that, being the weight of a tun of wine in its cask (c.2,240 lbs.), or forty cubic feet, whichever was the greater.[11] So, in practice, goods that were as dense, or denser, than wine (such as olive oil, soap, salt and iron), paid freight charges according to their weight, while goods that were light (such a wool or cork) paid by volume.

The analysis in this chapter is rooted in calculations of the number of freight tons each ship was carrying, based on an assignment of a unit of tonnage to each type of merchandise listed. Those interested in seeing how this was done can find a fuller discussion and the relevant figures in an online article that acts as an 'appendix' to this chapter.[12] Although the assignment of tonnage estimates for some goods was difficult, the most problematic cases involve forms of merchandise that were either shipped infrequently, or which would have taken up very little freight space. This means that even if substantial errors have been made in estimates of how much space a dozen fox skins, a hundred bowstaves, or an alabaster altarpiece took up, the impact on the overall analysis will be negligible.[13]

The discussion will begin with an examination of the shipping market based on the surviving 'particular' customs account for 1485/6, which covers the period from Michaelmas 1485 (29 September) to Michaelmas 1486. This account has been chosen because it is the earliest surviving account for Bristol that is in both good condition and which covers a

complete year. Following this, the customs account for 1503/4 will be considered, to illustrate both the ways in which the shipping market changed over time and the extent to which it remained the same. Finally, two accounts will be examined that cover seven-and-a-half months from Michaelmas 1465 to 14 May 1466. The importance of these accounts is that they relate to a period when the Newport Medieval Ship was in operation.[14] The data from this time will be further analysed to investigate the nature and operation of the vessels that carried Bristol's overseas trade. All the analysis in this chapter is based on spreadsheet transcriptions of the 'particular' customs accounts. These transcriptions follow the template and conventions earlier employed for an ESRC-funded project using sixteenth-century Bristol customs accounts.[15] The transcriptions are to be published separately via the University of Bristol's e-repository and as a Bristol Record Society volume.

1485/6

[Figures 8.1 and 8.2 about here]

Figure 8.1 – Value of merchandise, imported and exported from Bristol by destination, 1485/6

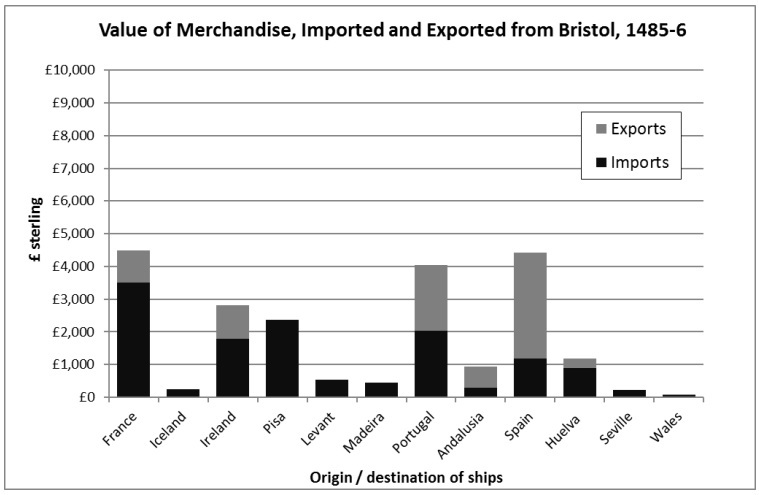


Figure 8.2 – Tons of merchandise, imported and exported from Bristol by destination, 1485/6

Figure 8.1 records the value of overseas trade shipped to or from Bristol in 1485/6; Figure 8.2 indicates the tonnage shipped that year. Although this chapter is concerned with

shipping, rather than with trade, it is useful to compare the two sets of data, in part because they illustrate the extent to which the figures relating to trade and shipping differ.[16] In both graphs the data is divided according to the places ships were recorded as sailing to or from. It can generally be assumed that this is the place the goods themselves came from, or were being sent to, since most commercial voyages in the period were straightforward affairs, involving a ship leaving Bristol and going directly to a single port, or a small number of ports in a region. Once the ship reached its destination, the cargo would be discharged and a new lading acquired using the revenue generated from the sale of the outbound cargo. The ship would then normally return straight back to Bristol. While more complex voyages did occur, multi-stop ventures appear to have been relatively unusual during this period.[17] So, in most cases, when a local ship is entered in the customs accounts as leaving Bristol for Ireland, Bordeaux or Lisbon, the entry was followed, after a gap of some months, by the same vessel returning from the specified area with a cargo that was typical for that region. For example, on 15 October 1485 the 'navicula' the *Michael* of Bristol, left the port under shipmaster John Corbet, bound for Huelva, the outport of Seville. On 17 March, Corbet returned with the *Michael* from Huelva with 138 tons of wine, olive oil and sugar. The ship then departed again for Andalusia on 18 April, still with Corbet as master. Finally, on 18 September, Corbet and his ship returned home from Lisbon, carrying 144 tons of salt, olive oil, vinegar and wine.[18] Lisbon lay 200 miles back up the Atlantic coast from Andalusia, on route to Bristol. This made it a logical stopping-off point for a ship returning from southern Spain, particularly given that Lisbon was a major destination for Bristol merchants.

Although the customs accounts seem to provide an accurate record of ship movements, one set of destinations listed in Figures 8.1 and 8.2 requires additional explanation: those in England or Wales. Since the Crown only levied customs duties on overseas trade, it may

seem odd that vessels are sometimes recorded as arriving from, or departing to, a port in England or Wales. This occurred when overseas goods had not paid custom following an initial arrival in the country, or when an outbound ship was planning to call at a port down the Bristol Channel, such as Minehead, before going abroad. Welsh ports feature fairly frequently in Bristol's customs accounts of this period because the Crown did not maintain customs officers in Wales. This meant that foreign goods sent to Wales were not subject to the Exchequer's customs duties so long as the goods remained in Wales.[19] On the other hand, any overseas merchandise that was subsequently sent on to an English port were subject to customs duties at that point. A typical example of this would be the arrival in Bristol of a 'batella' (boat) called the *Mawdelen* of Chepstow, from Chepstow, on 30 May 1486, laden with eight tuns of wine.[20] This should not be taken as evidence of the success of the vineyards of the Wye Valley, or even as proof that Chepstow vessels were involved in international trade. Rather it implies that a ship arriving from France, Spain or Portugal had landed wine in Chepstow and that part of the cargo was subsequently dispatched across the Severn in what was probably no more than a small lighter.

Figures 8.1 and 8.2 illustrate the importance of certain key trade routes – such as those to France, Portugal and 'Spain'. The latter designation ('Hispania' in the Bristol customs accounts) was only used to refer to ports in northern Spain, the trade to southern Spain typically being identified by the port (usually Seville or Huelva) or by the regional descriptor 'Andalusia'. In practice, most of the trade to 'Hispania' was with the Basque Country, such as San Sebastián, Errenteria, Pasajes and Fuenterrabia, which all lay within a few miles of each other close to the French border. Besides these continental destinations, Bristol's other main trading partner was Ireland, with most of the trade occurring with the ports of southeast Ireland, such as Waterford, Wexford and Cork. The entries relating to Pisa, Madeira and the

Levant in Figures 8.1 and 8.2 are highly unusual ones for this era. They concern three ships that arrived at Bristol at different points in the year with large and valuable cargoes.[21] Of these, only the expedition from the Levant seems to have been a 'Bristol' one, in that most of the merchandise belonged to Bristol merchants. It seems possible that the other two ships only sailed to Bristol because of the political uncertainty that followed the overthrow of Richard III by Henry Tudor in August 1485. As Susan Rose notes in this volume, piracy was particularly prevalent during periods of instability, with 1486 being a period of especially high tension.[22] So while ships sailing to England from Italy and Madeira normally went to Southampton or London, it may be the two shipmasters felt it was safer to run-up to Bristol this year, rather than risk the English Channel.[23]

Although Figures 8.1 and 8.2 tell the same broad story, there are important differences. For example, while the value of trade with northern Spain greatly exceeded that of Ireland, the *tonnage* of goods sent to/from Spain was much less than that sent to Ireland. This was because much of the Irish trade involved preserved fish, which was bulky relative to its value. More generally, it should be noted that while there was little difference between the recorded value of imports and exports at Bristol, import tonnages greatly exceeded export tonnages. Indeed, the combined tonnage of goods imported was more than five times greater than that exported. This meant that, rather as occurs today on the route between China and the United Kingdom, ships sailing to Bristol with full cargoes normally left near empty. Indeed, many would have departed in ballast, meaning that they needed to partially fill their hold with stones or mud to provide the stability required to stop the ship from capsizing. The difference between Bristol's fifteenth-century shipping market and the modern Chinese one, is that the imbalance in shipping demand was not a result of a basic imbalance of trade. Rather, it was because, while England imported a lot of goods that were of fairly low value relative to their

weight, the country exported much higher value products. So, even if overseas trade was fairly balanced in terms of value, the demand for shipping was not. Given this, it is worth reflecting on the nature of these goods.

[Figures 8.3 and 8.4 about here]

Figure 8.3 – Tons of merchandise imported to Bristol by commodity, 1485/6

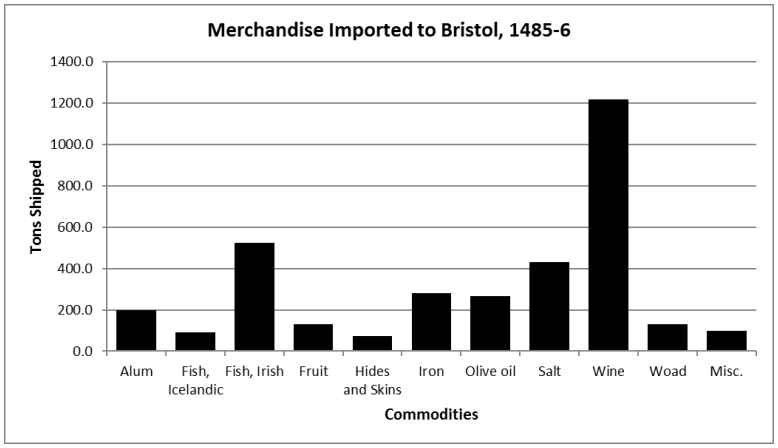


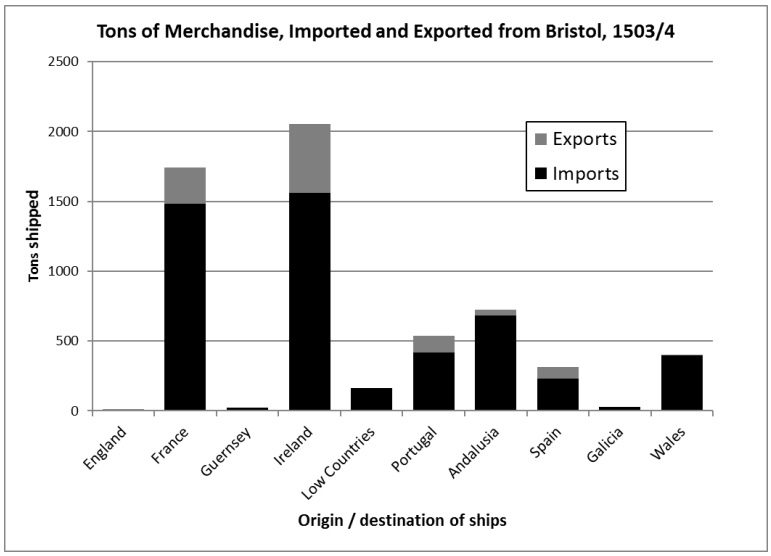
Figure 8.4 – Tons of merchandise exported from Bristol by commodity, 1485/6

Figure 8.3 illustrates the overwhelming importance of the wine trade to shippers, along with other wares produced in southern France, northern Spain, Portugal and Andalusia. These goods included olive oil, salt, fruit, woad dye and Basque iron. By contrast, woollen cloth,

which accounted for almost all of Bristol's export trade by value, consumed much less freight space. Indeed, while cloth was responsible for 97 per cent of exports by value, the total tonnage was only twice as great as the exports of beans and grain, a cheap but bulky produce.[24] This is even though, to allow for the fact that cloth is less dense than wine, the calculations make the generous assumption that a ton of cloth by weight occupied three 'freight tons'.

1503/4

Figure 8.5 – Tons of merchandise, imported and exported from Bristol by destination, 1503/4



[Figure 8.5 about here]

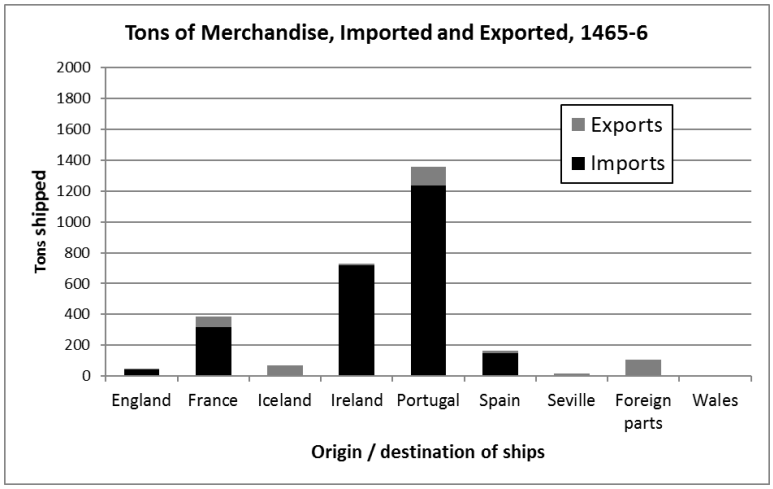
Having established some of the core features of the shipping market, the account for 1503/4 can be considered more briefly. When dealing with the 'particular' customs accounts, an issue that has to be accepted is that every year was to some degree an 'exceptional' year.

The account for 1485/6 was atypical because it included three ships sailing from Pisa, Madeira and the Levant. As Figure 8.5 illustrates, 1503/4 is somewhat unusual in that the volume of Irish trade was especially high. Perhaps more significantly, the twenty-year gap between this account and that for 1485/6 witnessed some notable developments. In particular, Portuguese trade declined relative to Spain, while there was a strong growth in French trade, most of which was a result in the resurgence in the export of wine from Bordeaux. These developments occurred in response to the geopolitical changes discussed in this volume by Wendy Childs – including the improvement of Anglo-Castilian relations and the stabilisation of Anglo-French relations. The growth in 'Welsh' trade, meanwhile, was a result of more ships dropping-off wine and woad in Welsh ports, most notably at Chepstow. An increase in this practice relative to the earlier period can probably be ascribed to a 1489 Navigation Act, which required English merchants to lade their wine and woad in English vessels.[25] This regulation could be circumvented by chartering a foreign ship to a Welsh port, where there were no customs officers to check on compliance.[26]

Although there are differences in the places ships sailed to in 1485/6 and 1503/4, it is perhaps more interesting to note the similarities. In particular, the fundamental imbalance between import and export shipping demand remained the same, since the goods shipped changed little. Cloth remained the main export, imports from Ireland still consisted primarily of preserved fish, shipments from the Continent were dominated by wine, oil, salt, fruit, woad and iron.[27]

1465/6

Figure 8.6 – Tons of merchandise, imported and exported from Bristol by destination, 1465/6



[Figure 8.6 about here]

Moving back forty years, the account for 1465/6 presents a somewhat different picture. Since the data only covers seven-and-a-half months (29 September 1465 – 14 May 1466) it is not directly comparable to the data from 1485/6 and 1503/4, which both cover a full year. This has an impact on both the total amount of goods shipped and on the composition of the goods. Since much trade was seasonal, the data may exaggerate the significance of places that were heavily involved in the export of products, such as wine, that were shipped primarily in the autumn and winter.

What Figure 8.6 reveals most strikingly is the predominance of Portuguese trade in 1465/6. This was probably typical for this decade, since the Gascon wine trade was badly affected by the disruption associated with the end of the Hundred Years' War in 1453. French

fears that England might try to reinvade the province led to restrictions being placed on English merchants in Bordeaux, while England, for its part, imposed an embargo on trade with the region that could only be circumvented by obtaining a special licence from the Crown. Meanwhile, relations with Castile had yet to improve to the extent that commerce with Spain was as safe or secure as it was with Portugal, a long-standing ally of England. The result was that Bristol's continental trade during the 1460s focused heavily on Lisbon. Nevertheless, in many respects the shipping market is similar to that discussed earlier: the demand for import shipping remained much higher than export shipping and the range of goods shipped was largely the same.[28]

The key points to be made about Bristol's international shipping market in the second half of the fifteenth century is that, although the countries Bristol traded with varied, the goods carried changed little. The most important consequence of this was that there was a persistent imbalance between the demand for import shipping and that for export. Shipowners would have had to accept that, for most voyages, their vessels would sail out almost empty. The income of shipowners would thus have depended almost entirely on the import trade. It seems likely that these features of the shipping market were long standing, since they were rooted in the basic nature of Bristol's overseas trade, which changed relatively little between the mid-fourteenth century and the mid-seventeenth century.[29] Indeed, such an imbalance in shipping demand is likely to have been a feature of much of the English shipping market during these centuries. That is because, throughout this era, English exports consisted primarily of high-value woollen broadcloth, while its imports included goods that were typically of lower value relative to their weight.

The Shipping Industry in 1465/6

Having examined the Severn Sea's shipping market, the following section will investigate how it was served. This will be done by analysing the size and origin of the vessels that appear in the Bristol customs account for 1465/6, when the Newport Medieval Ship was still in operation. The results are summarised in Table 8.1.

Ship Name	**Type**	**Min. tonnage**	**Destinations**
Edward of Bristol	*Navis*	309	Lisbon, Bordeaux
Mary Redcliffe [of Bristol]	*Navis*	247	Bordeaux
Christopher Damme [of Bristol]	*Navis*	232	Lisbon
Trinity of Bristol	*Navis*	225	Lisbon
Julian Bagote [of Bristol]	*Navis*	152	Lisbon
Mary Grace of Bristol	*Navis*	103	Lisbon, ?Iceland
Anthony of Bristol	*Navis*	69	Iceland
Mary Herbert	*Navis*	59	Lisbon
St Mary Grace of Lisbon	*Navicula*	99	Ireland
James of Guipúzcoa	*Navicula*	97	Northern Spain
George of Warwick	*Navicula*	70	Bordeaux
St Martha of Lisbon	*Navicula*	60	Algarve, Lisbon
St Michael of Viana do Castelo	*Navicula*	54	Viana do Castelo
Mary of Guipúzcoa	*Navicula*	54	Northern Spain
Mary Sharlok [? of Bristol]	*Navicula*	51	Ireland
Katherine of Lisbon	*Navicula*	40	Lisbon, Ireland
Trinity of Waterford	*Navicula*	36	Ireland
Mary of Waterford	*Navicula*	34	Ireland
Michael of Bideford	*Navicula*	16	Seville
Mary of Cork	*Batella*	37	Ireland
Nicholas of Cork	*Batella*	30	Ireland
James of Ballyhack	*Batella*	28	Ireland
Mary Waddon [of Bristol]	*Batella*	26	Ireland
Mary of New Ross	*Batella*	23	Ireland
Katherine of Bristol	*Batella*	21	Ireland
Mary of Kinsale	*Batella*	21	Ireland
Patrick of Bristol	*Batella*	20	Ireland
Christopher of 'Combe'	*Batella*	18	Ireland, Bristol Channel
James of Minehead	*Batella*	15	Ireland
Mary of Youghal	*Batella*	15	Ireland
Christopher of Cork	*Batella*	14	Ireland

Samson of Minehead	*Batella*	14	Ireland
George of Minehead	*Batella*	13	Ireland
George of Waterford	*Batella*	13	Ireland
Katherine of Waterford	*Batella*	13	Ireland
Trinity of Minehead	*Batella*	12	Ireland, Bristol Channel
Michael of Minehead	*Batella*	11	Ireland
Peter of Kinsale	*Batella*	11	Ireland
Patrick of Kinsale	*Batella*	10	Ireland
Clement of Bristol	*Batella*	10	Ireland
Margaret [of] 'Rode'	*Batella*	6	?River Avon
Mary of Shirehampton	*Batella*	6	River Avon
Swan of Bristol	*Batella*	4	River Avon
George of Tenby	*Batella*	3	Ireland, Bristol Channel
Jesus of Pill	*Batella*	3	River Avon
John of Minehead	*Batella*	2	Ireland
Katherine of Wexford	*Batella*	2	River Avon
Brian of Newnham	*Batella*	1	River Severn
Katherine of Minehead	*Batella*	1	Bristol Channel
Mary of Minehead	*Batella*	1	Ireland
Mary of Cardiff	*Batella*	1	?Ireland
Nicholas of Kinsale	*Batella*	1	Ireland
Trinity of 'Comber'	*Batella*	1	Ireland

Table 8.1 – Vessels Appearing in the Bristol 'Particular' Accounts in 1465/6

Table 8.1 shows the name and port of every vessel that appears in the 'particular' customs account over the seven-and-a-half-month period, along with the type of vessel as described in the account. The customs officers recognised three 'types', or sizes, of vessel, which they recorded in Latin – that being the language of Bristol's 'particular' accounts. These were the *navis* (great ship), the *navicula* (little ship) and the *batella* (boat). The table also provides the *minimum tonnage* of each vessel, which is based on the largest lading the vessel was recorded with that year. It should be noted that most of the vessels would have been larger than this, with a few being much larger. In part this was because, in some cases, only export shipments are available and, as pointed out earlier, ships rarely achieved a full lading on their outbound voyages. So, for example, the *navis* the *Anthony* of Bristol is listed

as having a minimum size of 69 tons, based on an outbound lading to Iceland. Yet other sources indicate that the *Anthony* was around 200 tons burden.[30] The figures relating to some ships would also be low because a given vessel had not achieved a full lading on the leg of the voyage referred to. It seems probable, for example, that some of the *batella* would have been substantially larger than the one to three tons of merchandise recorded in the accounts. Lastly, even if a ship had been fully laden on a return journey, the amount noted in the customs account would often have been lower than the amount originally loaded. This was because customs duties were only levied on the marketable merchandise that remained at the end of a voyage. So, wares that had spoilt or been lost were not taxed or recorded. The loss of cargo was a particular problem with liquid goods, such as wine and olive oil. These were transported in wooden casks that were susceptible to 'ullage' (leakage) during a voyage, to the extent that contemporaries expected to lose about 10 per cent of a wine cargo in the voyage from Bordeaux to England.[31] So a ship laden with 200 tuns of wine in Lisbon might only have 180 tuns in it by the time it reached Bristol. Given the centrality of the wine trade to Bristol's continental shipping market, it can be assumed that most of the *navis* and *navicula* recorded in Table 1 would have had a greater carrying capacity, in tons burden, than the recorded 'minimum tonnage'.

The figures for 1465/6 reveal that Bristol's international shipping market in this period was served by a wide variety of vessels from Bristol, Ireland, Portugal, Gipuzkoa (the Basque country) and the smaller ports of the Bristol Channel. On the other hand, many of the vessels were mere boats and some, such as the *Jesus* of Pill or the *Mary* of Shirehampton, were probably no more than tiny lighters of a few tons burden. Such small craft were probably only used in the Severn Sea and its tributaries, with some rarely venturing beyond Avonmouth.[32] By contrast, the larger *batella* could be up to 37 tons burden and were used

primarily for the Irish trade. Moving up the scale, the term '*navicula'* seems to have been applied to vessels of c.35-150 tons burden.[33] Some of these served the Irish trade but were capable of sailing much further. The *Matthew* of Bristol, for example, which John Cabot employed for his famous discovery voyage to North America in 1497, was a *navicula* of 50 tons burden.[34] Finally, the greatest ships were those described as *navis*, of which eight appear in the customs accounts for 1465/6. These were used almost exclusively in Bristol's long-distance trade, such as that to Lisbon. The great ships are of special interest for current purposes because the Newport Medieval Ship, with an estimated 'portage' of 161 tons, would have been classed as a *navis*.

In the table, the ships have been listed, first, according to their 'type' and then by their minimum recorded tonnage. The exact size order of the vessels would have been somewhat different to that given here. Nevertheless, the table demonstrates a strong correlation between the size of ships and the markets they served. The great ships were used for long-distance trade, while the little boats were employed in coastal traffic or for trips to Ireland. The length of the voyages, and probably also the size of the vessels, also had an impact on the duration of the voyages. The boats engaged in the Irish trade could complete a return voyage in little more than a month. For instance, the *Patrick* of Bristol, under shipmaster Richard Haket, departed to Ireland on 12 October 1465 but had returned by 22 November. Similarly, the *Samson* of Minehead, under master William Codd, entered Bristol from Ireland on three occasions in a five-month period: 9 October 1465, 3 December and 28 February 1466. Such vessels could have completed half-a-dozen trips to Ireland each year. As for the *navicula*, it was observed earlier that in 1485/6 the *Michael* of Bristol completed two round-trip voyages to Lisbon in eleven months. By contrast, it seems unlikely the *navis* engaged in the Lisbon run in 1465/6 could have managed that. For example, three *navis*, the *Christopher Damme* of

Bristol, under master John Power, the *Mary Herbert* under master John Brisley, and the *Trinity* of Bristol, under Thomas Lony, left Bristol for Lisbon between 2-5 October 1465. The *Mary Herbert* is recorded as returning on 15 March 1466 and the *Christopher Damme* and the *Trinity* two days later. Since the customs accounts record the day a ship's consignment was entered into the books, rather than the date that a ship physically entered or left the port, it seems likely that these three great ships had sailed together to ensure their collective safety. Their voyage took five-and-a-half months. During the later-sixteenth century ships typically took three weeks to sail between Bristol and south-eastern Iberia.[35] If the sailing times of fifteenth-century ships were similar, less than a third of the total voyage would have been spent at sea.[36] The rest of the trip would have been spent in Lisbon, while the cargo was discharged and the merchants sold their goods, purchased wares for the return journey and, finally, loaded the homebound merchandise. Similarly, on their return to Bristol, it was normal for the port's vessels to remain home for several weeks, while the vessel was refitted and the owners prepared their next enterprise. For instance, following the return of the three ships mentioned above, seven weeks passed before the *Trinity* and the *Christopher Damme* left Bristol, sailing once more to Lisbon.[37] Given that seven months passed between the ships' two departures from Bristol in October 1465 and May 1466, it seems unlikely they would have been able to complete two voyages that year. In some cases, moreover, it seems that the owners of Bristol's greatest ships did not even try to. For example, the pattern of deployment of a c.380-ton *navis*, the *Anthony* of Bristol, during the 1480s shows that, on at least one occasion, it completed only one voyage to Lisbon in a year, departing Bristol on 2 October 1486 and only returning on 1 May 1487. After that, it did not set sail again till 8 September, four months later [38] The extended stopover may have been because the owner wanted to ensure the ship was in Lisbon by the early autumn, ready to bring the new wine and olive oil home.

Conclusion

This chapter has explored the operation of a late medieval shipping market and the nature of the industry that served it in ways that have rarely been attempted for the pre-modern period. In doing so, it has developed a methodology and made suggestions about Bristol's shipping market that have broader relevance. That said, this chapter was written in the hope that it might show how the Newport Medieval Ship would have been used during its commercial life. It will thus finish by summing up some of the implications of the research for how the ship might be understood, as well as whether the foregoing research throws light on the suggestions made by Ralph Griffiths and Bob Trett in this volume about the identity of the vessel.

The Newport Medieval Ship was a great commercial merchantman. When locally owned, its main function would have been to serve the trade between Bristol and Portugal. In a typical year the vessel would have set sail for southern Iberia in the early autumn carrying fine woollen broadcloth belonging to merchants from Bristol and the wider region. But for the owners of the ship, this was very much the loss-making part of the trip, for the ship would have been largely empty and little or no freight dues would have been collected on the cargo.

After a voyage of about three weeks, the ship would have reached Lisbon and the cloth discharged. This would have then been sold, with the proceeds used to buy wine, olive oil, fruit and salt. The process of acquiring a cargo typically took two or three months, which

meant that the ship would usually not return to Bristol until the spring. The length of this stopover is important to bear in mind when considering the 'small-find' evidence from the Newport Medieval Ship, especially the material that has been interpreted as 'crew waste', such as the broken bits of Portuguese pottery, the southern Iberian foodstuffs and the foreign coins.[39] Some see this as evidence that the ship had a foreign crew or was actually an Iberian-owned vessel.[40] That may be wrong. When thinking about the life of English mariners sailing to Portugal at this time, the key point to recall is that most of their time on board ship was not spent in England, or even on the voyage to or from Portugal. Rather, the bulk of their time was spent in Lisbon, using the ship as a base during the long months before the ship returned home. So, even if the ship was an English vessel, with an English crew, most of its 'occupational' waste would have been generated in Lisbon. This would have included the coins, since English sailors typically received half their pay, in foreign coin, while abroad.[41] Given that they had no need for English money on their voyage out and would not get the remainder of their pay until they had returned home, it should be *expected* that lost coins found on an English merchantman would be predominantly foreign. Similarly, broken pottery of the types found on the Newport Medieval Ship is likely to have been associated with port time; sailors rarely used pottery vessels or cooking pots when at sea, since they were too easily broken.

Bearing in mind the pattern of deployment of Bristol ships at this time and comparing it to a study of Bristol's mid-sixteenth century shipping, one difference may be noted. During the 1540s, Bristol's continental traders, which were typically smaller than those of the fifteenth century, nearly always achieved two voyages per year and they often managed three: one perhaps to Andalusia and two to Biscay.[42] By contrast, the largest Bristol ships of the fifteenth century seem to have managed rather less. That great ships undertook fewer voyages

is not surprising, not just because it would have taken longer to load and unload their cargoes, but because it would have taken more time to sell sufficient freight space to make a voyage worthwhile. If larger ships tended to make fewer voyages each year, this may help to explain Ian Friel's observation that England's total shipping capacity appears to have declined between the mid-fifteenth century and the mid-sixteenth century.[43] He notes that fewer great ships were built by the later fifteenth century: a point that is certainly borne out by the data from the Bristol customs accounts. Indeed, while eight *navis* are recorded in the 1465/6 customs accounts, only two appear in the 1485/6 account and none in the account for 1503/4.[44] On the other hand, a decline in the total capacity of the English fleet does not necessarily mean that less merchandise was shipped. If smaller ships could undertake more voyages each year, a fleet with a smaller combined tonnage could have carried the same quantity of merchandise.

A twice-yearly voyage between Bristol and Lisbon is likely to have been typical for the Newport Medieval Ship when it was English owned. It would not have been a constant, since the pattern of activity would have been interspersed by other forms of employment. In some years the ship might have undertaken a voyage to Iceland over the summer, or it might have been engaged in the Biscay trade, operating under a safe-conduct to ensure its safety in France or Spain. In other years the ship might have been employed in more unusual activities, such as a voyage into the Mediterranean. Given that its life spanned both the end of the Hundred Years' War and the start of the Wars of the Roses, it is also likely that the ship spent some of its life in naval service or as a privateer, for which it would certainly have been considered suitable.

Ralph Griffiths and Bob Trett have suggested that the Newport Ship may have been owned by Sir William Herbert (d. July 1469) who was the chief magnate of Wales and the Lord of Newport.[45] Following his execution by the Earl of Warwick, any ships Herbert possessed would have gone to Warwick. Herbert is known to have had at least two ships, one of which was a *navis* called the *Mary*. Warwick meanwhile had a fleet of ships during the 1450s and 1460s, which amounted to a private navy but were also used by the 'Kingmaker' for commercial purposes.[46] The Bristol customs account of 1465/6 include at least two ships that appear to be the property of these magnates. The *navis* described in the accounts as the '*Mary Herberd'* was almost certainly William Herbert's *Mary.* At this time, it was common practice for Bristol's customs officer to append an owner's surname to a ship's name if they wished to avoid any confusion about the vessel's identity. So, for example, the *Christopher Damme* and the *Julian Bagotte*, listed in Table 1, seem to be the respective properties of the Bristol merchants William Damme and John Bagot.[47] In a similar manner, the *navicula* the *George of Warwick*, recorded in the 1465/6 account, was almost certainly one of the Earl of Warwick's ships, given that the Midlands town lacked a port or navigable river.[48] Since the *George of Warwick* was described twice in the accounts as a *navicula*, it would presumably have been of less than 150 tons burden and thus too small to be the Newport Ship.[49] On the other hand, the *George* might be the vessel mentioned in a financial memorandum issued by the Earl in November 1469, which concerns a ship he was having refitted at Newport.

Following the Battle of Edgcote in July 1469, the Earl of Warwick took control of the Lordship of Newport. So, it would not be surprising if he had decided to get one of his ships serviced there, given that he was certainly engaged in Bristol's trade and Newport was capable of carrying out maintenance work on great ships – as the discovery of the Newport Medieval Ship itself demonstrates. On the other hand, it is impossible to tell whether the

memorandum relates to one of the Earl of Warwick's existing fleet, or whether it concerns a vessel that had formerly been owned by Herbert. If the *George* is unlikely to have been the Newport Ship, a stronger case can be made for the *Mary Herbert*. Since Bristol's customs officers described it as a *navis*, it was of the right size to be the Newport ship. It was also involved in the Lisbon trade, which fits with the archaeological evidence for the ship.

Above all else, the 'particular' customs accounts illustrate the extent to which the region's larger vessels existed primarily to service Bristol's long-distance trade. This included those ships that belonged to the country's great magnates. For example, most of the goods listed on both the *Mary Herbert* and the *George of Warwick* belonged to Bristol merchants, with the *Mary Herbert* sailing to and from Lisbon in 1465/6 in the company of two other Bristol ships. What is perhaps different about the *Mary Herbert* is that only 59 tons of wine and other goods were declared at Bristol on its return journey. Since the ship was described as a *navis*, this could not have been a full lading. The most plausible explanation for the shortfall is that a significant part of the cargo was owned directly by Sir William Herbert and been landed in Wales. This would have been legal if the merchandise was for his own use, or if it was intended for sale in Wales. [50]

At present, it is unclear who owned the Newport Medieval Ship, even at the end of its life. It could have been the property of powerful aristocrats, Bristol merchants, or men from Newport. This said, the latter part of its existence would have been shaped in great part by the commercial world of the Severn Sea and by the nature and pattern of demand for long-distance shipping in the region. In this period, the great ships of the Severn Sea were used for many purposes: including war, privateering and the earliest exploration voyages launched

from England. Yet their core function remained the transport of Bristol's long-distance trade with France, Spain, Iceland and, above all, Lisbon.

Appendix

	Imports	Exports
England	42	2
France	317	68
Iceland	0	69
Ireland	719	11
Portugal	1233	123
Spain	151	11
Seville	0	16
Foreign parts	0	108
Wales	3	0
Total	2574	300

	Imports	Exports
England	£91	£7
France	£1,182	£1,665
Iceland	£0	£106
Ireland	£1,368	£120
Portugal	£3,803	£2,973
Spain	£533	£256
Seville	£0	£391
Foreign parts	£0	£431
Wales	£7	£0
Total	£6,984	£5,948

Table 8.2 – 1465-6: Tonnages and Value of Trade in £ by destination

	Imports	Exports
France	812	42
Iceland	105	0
Ireland	614	251
Pisa	241	0
Levant	98	0
Madeira	14	0
Portugal	830	117
Andalusia	100	28
Spain	282	134
Huelva	271	12
Seville	60	0
Wales	16	11
Total	3444	596

	Imports	Exports
France	£3,512	£968
Iceland	£238	£0
Ireland	£1,795	£1,017
Pisa	£2,374	£0
Levant	£534	£0
Madeira	£456	£0
Portugal	£2,041	£2,004
Andalusia	£282	£657
Spain	£1,179	£3,250
Huelva	£894	£292
Seville	£236	£0
Wales	£66	£10
Total	£13,607	£8,197

Table 8.3 – 1485-6: Tonnages and Value of Trade in £ by destination

	Imports	Exports
England	4	8
France	1484	261
Guernsey	24	0
Ireland	1560	495
Low Countries	165	0
Portugal	420	117
Andalusia	685	37
Spain	230	82
Galicia	28	0
Wales	397	2
Total	4997	1002

	Imports	Exports
England	£19	£165
France	£6,190	£2,203
Guernsey	£30	£0
Ireland	£3,369	£1,880
Low Countries	£214	£0
Portugal	£1,797	£1,887
Andalusia	£2,733	£810
Spain	£583	£1,576
Galicia	£44	£0
Wales	£1,130	£34
Total	£16,109	£8,555

Table 8.4 – 1503-4: Tonnages and Value of Trade in £ by destination

[1] See Toby Jones and Nigel Nayling's chapter in this volume.

[2] E. M. Carus-Wilson, *The Overseas Trade of Bristol in the Later Middle Ages,* Bristol Record Society Vol. VII (Bristol, 1937), pp. 64-5; James A. Williamson, *The Cabot Voyages and Bristol Discovery under Henry VII,* Hakluyt Society, 2nd series, Vol. CXX (Cambridge, 1962), 247; Jean Vanes, ed., *Documents Illustrating the Overseas Trade of Bristol in the Sixteenth Century,* Bristol Record Society, Vol. XXXI (Bristol, 1979), pp. 99-100.

[3] In her unpublished paper for the 'World of the Newport Ship' conference, Margaret Condon observed that some countries, including Castile, sought to restrict the sale of ships to foreigners. On the other hand, sales did certainly occur under licence and possibly also via covert transactions. Illicit sales might, for instance, have been coloured (falsely represented) as a long-term bareboat charter, or a seizure made abroad to reclaim a debt, or even as an act of piracy. For examples of international ship transfers by sale or seizure, see also the chapters in this volume by Ralph Griffiths, Wendy Childs and Susan Rose.

[4] See Toby Jones and Nigel Nayling's chapter in this volume.

[5] See Toby Jones and Nigel Nayling's chapter in this volume.

[6] The best general studies of Bristol's overseas trade during the fifteenth century remain: E. M. Carus Wilson, 'The overseas trade of Bristol' and 'The Iceland trade' in E. Power & M. M. Postan (eds.), *Studies in English Trade in the Fifteenth Century* (London, 1933), pp. 155-246.

[7] Bristol's overseas trade in 1465/6 was worth £12,932, of which £6,776 (52 per cent) was with Portugal. All of this was with Lisbon, apart from the *Sancta Martha* of Lisbon entering from the Algarve on 19 November 1465 with merchandise valued at £158 and the *Sancta Michael* of Viana do Castello, entering from that port on 17 April 1466 with goods worth £213.

[8] DFS Worldwide London UK, 'Shipping to China' <http://www.dfsworldwide.com/Shipping-to-China.html>. Accessed 12 July 2014.

[9] Duncan Taylor, 'The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century' (unpublished Ph.D. thesis, University of Bristol, 2009), p. 5.

[10] One of the differences between the 'particular' customs accounts and the 'port books' that replaced them from 1565 is that the latter were meant to specify the capacity of the vessel in tons burden: TNA: PRO, E190.

[11] When goods had a specific gravity that was roughly equal to/greater than wine (e.g. beer, iron, oil, coal, lead or salt) the tonnage is usually figured by weight in the accounts. If a consignment had a specific gravity that was significantly lower than wine (e.g. wool), the tonnage may be calculated by volume, with forty cubic foot typically being considered to be one 'freight ton': Frederic C. Lane, 'Tonnages, medieval and modern', *Economic History Review*, 17 (1964), pp. 219-20.

[12] Evan T. Jones, ‘Tonnage estimates of goods recorded in the Bristol ‘particular’ customs accounts: 1465/6, 1485/6, 1503/4’ (unpublished working paper, University of Bristol, PURE, Oct 2017) http://hdl.handle.net/1983/400b49af-7e71-4f3f-ac2b-3867e9e2b1e6.

[13] See Table 8.3 in the Appendix to this chapter.

[14] There are no surviving Bristol customs accounts from the 1450s. Two other accounts survive from the 1460s: TNA: PRO, E122/19/126 (26 March - 29 September 1461) and E122/19/6 (16 August to 14 November 1469).

[15] 'Ireland-Bristol trade in the sixteenth century' (RES-000-23-1461), 2006-8. The transcriptions of the fifteenth-century accounts was undertaken as part of the University of Bristol’s ‘Cabot Project’ (2009-), funded by Gretchen Bauta, a private Canadian benefactor.

[16] The raw figures on which this and the other graphs in this chapter are based can be found in the appendix to this chapter.

[17] In some cases, it is possible to infer the existence of a more complex voyage from the ‘particular’ accounts. For example, on 15 February 1466 the ‘navicula’ the *St Mary Grace* of Lisbon, master Giles Gonzales, arrived from Ireland carrying Irish products such as fish, linen and sheep skins. When it departed on 28 February, it was carrying salt and cloth, which suggests it was sailing back to Ireland, at least initially, rather than Portugal: Margaret M. Condon and Evan T. Jones (eds.), ‘Bristol ‘particular’ Customs Account, 1465/6’ (To be published online); TNA: PRO, E122 19/4. The existence of more complex voyages involving multiple ports are also sometimes referred to in court cases: Carus-Wilson, *Overseas Trade of Bristol*, pp. 106-8.

[18] To be published online.

[19] This exemption survived until the 1560s: W. R. B. Robinson, 'The establishment of royal customs in Glamorgan and Monmouthshire under Elizabeth I', *Bulletin of the Board of Celtic Studies,* 23/4 (1970), pp. 356-7.

[20] Tim Bowly, Margaret M. Condon and Evan T. Jones (eds.), 'Bristol 'particular' Customs Account, 1485/6' (To be published online); TNA: PRO, E122/20/5.

[21] The *Olyver* of Galway is recorded as arriving from Pisa on 16 November 1485 carrying alum, malmsey, currants and sugar, belonging to a number of alien and indigenous merchants, none of whom appear to be from Bristol. The *Marie* of Bilboa entered from the Levant (the contemporary term for the Eastern Mediterranean) on 18 June 1486 with an exotic cargo, including dates, pepper, silk, cinnamon, sugar, mercury and wine – the last of which is likely to have been 'rumney' and/or 'malmsey', the sweet and precious wines of Greece and Crete. Much of the merchandise belonged to prominent Bristol merchants, such as John Esterfeld, John Pynke and John Hemmyng. The *Mare Petat* (port unknown), arrived from Madeira on 19 September 1486 with sugar belonging to foreign merchants: Bowly, Condon and Jones, 'Bristol 'particular' Customs Account, 1485/6'; TNA: PRO, E122/20/5.

[22] See Susan Rose's chapter in this volume.

[23] For the regular pattern of Italian trade see Francesco Guidi-Bruscoli's chapter in this volume, for the Iberian trade, see the chapter by Hilario Casado Alonso and Flávio Miranda.

[24] The 'nominal' value of exports this year was £8,197 of which £7,948 consisted of cloth. The value of the beans and malt, as determined by the customs officers, was £108.

[25] 'An Act against bringing into this Realme Wynes in forrayne bottomes', *Statutes of the Realm,* Vol. 2, pp. 534-5.

[26] An additional advantage of unlading goods in a Welsh port is that, in certain circumstances, it enabled merchants to avoid paying the duty of 'prisage' on wine: Evan T. Jones, *Inside the Illicit Economy: Reconstructing the Smugglers' Trade of Sixteenth Century Bristol* (Farnham, 2012), pp 186-91.

[27] The chief imports in 1503/4 were: wine (1,876 tons), Irish fish (1,061 tons), salt (458 tons), iron (268 tons), woad (234 tons), grain (189 tons), fruit (184 tons) and olive oil (116 tons). Together these accounted for 93 per cent of the goods imported (4,735 tons). The chief exports were woollen cloth paying custom (299 tons), other forms of woollen cloth (34 tons), beans, malt and wheat (324 tons) and coal (99 tons). Together these commodities accounted for 83 per cent of exports (1,039 tons). That Bristol was both importing and exporting basic foodstuffs may seem surprising, but can probably be explained by the timing. The export of foodstuffs took place almost entirely during the winter and early spring, while the grain was all imported in July 1504, primarily from the Low Countries.

[28] The chief imports in 1465/6 were: wine (881 tons), Irish fish (555 tons), salt (354 tons), olive oil (126 tons), iron (125 tons) and fruit (75 tons). Together these accounted for 91 per cent of the goods imported (2,318 tons). The chief export was woollen cloth paying custom (250 tons), along with other forms of woollen cloth (27 tons), salt being sent to Ireland (92 tons) and beans, malt and wheat (16 tons). Together these commodities accounted for 86 per cent of exports (447 tons).

[29] It is certainly the case that Bristol's shipping market in the 1540s was very similar, with the surviving business records from the mid-sixteenth century confirming that the freight receipts of Bristol's ship-owners depended on imports: Evan T. Jones, 'The Bristol Shipping Industry in the Sixteenth Century' (unpublished Ph.D. thesis, University of Edinburgh, 1998), pp. 59-

64. For the later development of Bristol's trade: Richard Stone, 'The overseas trade of Bristol before the Civil War', *International Journal of Maritime Histor*y, 23/2 (2011), pp. 211-239.

[30] Carus-Wilson, *Overseas Trade*, pp. 135-37

[31] Vanes, *Documents Illustrating*, pp. 85-6; Jones, *Inside the Illicit Economy*, p. 77.

[32] Later Port Book evidence indicates that some of the vessels used for freighting goods between Bristol and Ireland were very small. For instance, the *Sunday* of Wexford, which left Bristol for Wexford on the 5 April 1576 was just 3 tons burden, while the *James* of Dungarvan, which sailed to Dungarvan on 13 August 1576 was 4 tons burden: Susan Flavin and Evan T. Jones (eds.), 'Bristol Port Book, Overseas Outwards, 1575/6' (University of Bristol, ROSE, 2009) http://hdl.handle.net/1983/1306.

[33] While in this account the largest recorded lading is 106 tons, accounts for other years suggest that a 'navicula' could be somewhat larger. For example, the 'navicula' *Michael* of Bristol, discussed earlier in this chapter made two voyages in 1485/6 returning in one instance with 138 tons of merchandise and the other with 144 tons.

[34] In the 1503/4 'particular' customs account, the *Matthew* of Bristol appears five times, servicing the trade to Ireland, Bordeaux and northern Spain: Evan T. Jones, 'The *Matthew* of Bristol and the financiers of John Cabot's 1497 voyage to North America', *English Historical Review*, 121 (2006).

[35] The sailing times of a number of voyages in the 1540s suggest the run between Biscay and Bristol could be completed in eleven or twelve days, while the depiction of a 'model' voyage of the 1580s suggest that the voyage from Bristol to Sanlúcar de Barrameda in Andalusia might be accomplished in three weeks: Jones, 'Bristol Shipping Industry', p. 16; John Brown, *The Marchants Avizo*, (London 1589). Based on known fifteenth-century voyage times

between England and Biscay, it appears that sailing times were similar (see Wendy Childs' chapter in this volume).

[36] Known sailing times for late medieval ships appear to be similar to those from the sixteenth century. See the chapters by Francesco Guidi-Bruscoli and Wendy Childs in this volume.

[37] The *Trinity* was recorded as leaving on 3 May, the *Christopher Damme* on 6 May. It seems unlikely that the *Mary Herbert* joined them on this occasion, given that the ship is not included in the account, which ran on till 14 May.

[38] On 2 October 1486 the *Anthony* of Bristol sailed to Lisbon, returning on 1 May 1487. It then seems to have remained in port till 8 September, when it departed again for Lisbon. This time it managed to complete its voyage in five months, albeit it was wrecked on 25 February 1488 as it came into Kingroad: TNA: PRO, E122/20/7, mm. 2d., 14d-15d, 23d; Margaret M. Condon and Evan T. Jones (eds.), 'William Weston v Thomas Smith: Chancery Petition, 1490' (University of Bristol, PURE, 2012) <http://hdl.handle.net/1983/2539979c-d80a-4238-9798-244735e73e20>.

[39] See Toby Jones and Nigel Nayling's chapter in this volume.

[40] See, for example, Bob Trett's chapter in this volume.

[41] T. F. Reddaway and A. A. Ruddock (eds.), 'The accounts of John Balsall, purser of the *Trinity* of Bristol, 1480-1' *Camden Miscellany* XXIII (1969), pp. 15-19; A. Hanham, *The Celys and their World: An English Merchant Family of the Fifteenth Century* (Cambridge, 1985), pp. 370, 379, 382, 392.

[42] Jones, 'Bristol Shipping Industry', p. 96.

[43] See Ian Friel's chapter in this volume.

[44] These were: the *Anthony* of Bristol, sails to Lisbon 16 November 1485; the *Oliver* of Galway, arrives from Pisa 19 Nov 1485 and the *Trinity* of London, returns from Iceland 18 Sept 1486.

[45] See the chapters by Ralph Griffiths and Bob Trett in this volume.

[46] Michael Hicks, *Warwick the Kingmaker* (Oxford, 1998), pp. 250-51; Susan Rose, *England's Medieval Navy, 1066-1509* (Seaforth, 2013), pp. 156-58.

[47] William Damme is recorded as trading on a ship 'of Bristol', called the *Christopher* during the 1440s, while a licence of 1461 notes that the *Christopher Damme* of Bristol was then in royal service. The Bristol merchant John Bagot was granted a licence in 1461 to trade in the *Julian* of Bristol: Carus-Wilson, *Overseas Trade of Bristol*, p. 126.

[48] A very similar naming pattern is evident in the '*Marie Welshote*' (i.e. *Mary Wiltshire*) of Bristol. In 1458 James Butler, Earl of Wiltshire and Treasurer of England, was granted a licence to trade to Aquitaine or Britany with his ship: Carus-Wilson, *Overseas Trade of Bristol*, pp. 119-20; TNA: PRO, C76/140 m. 22.

[49] It may be the 140-ton *George* that Warwick provided for naval expeditions undertaken from 1462-4: Hicks, *Warwick*, p. 250.

[50] A third possibility is that William Herbert persuaded the customs officer of Bristol to overlook his goods. This would have been even easier once his brother 'Thomas Herbert', was appointed Customer of Bristol in May 1466: D. H. Thomas, *The Herberts of Raglan and the Battle of Edgcote, 1469* (Enfield, 1994), pp. 90-91.